

# **SECTION C**

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## **SECTION C**

### **GENERAL REQUIREMENTS**

#### **CHAPTER 5**

##### **REGIONAL EMISSIONS ANALYSIS**

This Chapter discusses the regional emissions analysis requirements which are applicable for all nonattainment and maintenance areas in making a conformity determination. Specific regional analysis requirements applicable to nonattainment and maintenance areas are specified in 40 CFR §93.118, as amended by 62 FR 43810-11, Aug. 15, 1997 and 40 CFR §93.119, as amended by 62 FR 43812-13, Aug. 15, 1997 of the transportation conformity rule, and are discussed in detail in Section D of this Reference Guide.

Very often, when “regional emissions analysis” is mentioned, planners equate it with the transportation and emissions modeling *processes* - the mechanics of running the models. Although modeling processes form the core of the regional emissions analysis, there are a number of general and specific requirements of regional analysis that are essential to the conformity process. These requirements will be discussed in detail in this and the following two Chapters. In this Chapter, the focus will be on the general requirements for determining regional transportation-related emissions, including the type of projects to be included, projects that are exempted, and the treatment of emissions credits. Specific regional analysis requirements based on an area’s nonattainment classification will be covered in Chapters 6, 7 and 8. For example, network models required for all serious and above ozone and CO areas will be discussed in detail in Chapter 6.

##### **REGIONAL EMISSIONS ANALYSIS REQUIREMENT**

Regional emissions analysis forms the basis of the conformity determination and is performed to demonstrate the consistency of transportation plans/TIPs with the SIP motor vehicle emissions budgets.

*CAA §176(c)(2)(A), 42 U.S.C. §7506(c)(2)*

*...emissions expected from implementation of plans and programs are consistent with estimates of emissions from motor vehicles and necessary emissions reductions contained in the applicable implementation plan.*

##### **WHAT SHOULD BE INCLUDED IN THE REGIONAL EMISSIONS ANALYSIS ?**

*40 CFR §93.122, as amended by 62 FR 43780, 43803, August 15, 1997*

*The regional emissions analysis required by §§93.118 and 93.119 for the transportation plan, TIP, or project not from a conforming plan/TIP must include all regionally significant projects expected in the nonattainment or maintenance area. The analysis shall include FHWA/FTA projects proposed in the transportation plan/TIP and all other regionally significant projects which are disclosed to the MPO as required by §93.105. Projects which are not regionally significant are not required to be explicitly modeled, but vehicle miles traveled (VMT) from such projects must be estimated in accordance with reasonable professional practice. The effects of TCMs and similar projects that are not regionally significant may also be estimated in accordance with reasonable professional practice.*

Regional emissions analysis should reflect emissions of all travel, including:

- 1) All federal projects and all regionally significant non-federal projects;
- 2) All regionally-significant projects, regardless of funding source, are required to be included in the model; and,
- 3) VMT from all other projects (including TCMs) that are not required to be explicitly modeled must be estimated based upon reasonable professional practice.

In addition, the regional emissions analysis must estimate total projected emissions for certain future years (including milestone and attainment years as identified in the SIP and discussed in Chapter 1), and may include the effects of any emissions control programs which are already adopted by the enforcing jurisdiction (such as vehicle inspection and maintenance programs and reformulated gasoline and diesel fuel).

### **Regionally Significant Projects**

*40 CFR §93.101, as amended by 62 FR 43780, 43803, August 15, 1997*

*Regionally significant project means transportation project (other than an exempt project) that is on a facility which serves regional transportation needs (such as access to and from the area outside of the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area's transportation network, including, at a minimum, all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel.*

It should be noted that determining which minor arterials and/or other projects should be considered “regionally significant” for the purpose of regional analysis for each nonattainment area is determined through the interagency consultation process (40 CFR §93.105(c)(1)(ii), as amended by 62 FR 43805, Aug. 15, 1997; see also Chapter 2). Under this process, it is possible that regional significance could vary from State to State or area to area. For example, one specific nonattainment area identifies a regionally significant project as a minor arterial or higher classification. In addition, once a project is identified as regionally significant, it must be included in the analysis regardless of funding source.

## **Projects In The Transportation Plan/TIP**

The conformity rule requires that emissions from all Federal (FHWA/FTA) and non-Federal projects in the plan/TIP, including regionally significant traffic signal synchronization projects be included in the regional analysis. Projects which are not regionally significant must also be included. In other words, regional analysis must include *all travel*.

### *Federal Projects*

The transportation conformity rule defines FHWA/FTA projects as follows:

*40 CFR §93.101, as amended by 62 FR 43802, August 15, 1997*

*FHWA/FTA project, for the purpose of this subpart, is any highway or transit project which is proposed to receive funding assistance and approval through the Federal Aid Highway Program or the Federal mass transit program, or requires Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) approval for some aspect of the project, such as connection to an interstate highway or deviation from applicable design standards on the interstate system.*

### *Non-Federal Projects*

*62 FR 43788-43790, August 15, 1997*

*Non-Federal projects are projects which are funded or approved by a recipient of Federal funds designated under title 23 U.S.C. or the Federal Transit Laws (49 U.S.C. Chapter 53), but which do not require any FHWA/FTA funding or approvals.*

A recipient of funds is defined as follows:

*40 CFR §93.101, as amended by 62 FR 43803, August 15, 1997*

*Recipient of funds designated under title 23 U.S.C. or the Federal Transit Laws means any agency at any level of State, county, city, or regional government that routinely receives title 23 U.S.C. or the Federal Transit Laws funds to construct FHWA/FTA projects, operate FHWA/FTA projects or equipment, purchase equipment, or undertake other services or operations via contracts or agreements. This definition does not include private landowners or developers, or contractors or entities that are only paid for services or products created by their own employees.*

The conformity rule allows regionally significant non-federal transportation projects to proceed during a transportation plan/TIP conformity lapse, provided the project was included in the regional emissions analysis supporting the most recent transportation plan/TIP conformity determination and regional analysis *and the project was approved by the non-federal entity prior to the lapse*. (See Chapter 4 for

complete information on a conformity lapse.)

A non-federal project cannot go forward during a conformity lapse if its design concept and scope has changed significantly since the most recent plan/TIP conformity determination and regional analysis or if its implementation date changes and alters the emissions analysis supporting the most recent conforming plan/TIP projected for a given analysis year. In either case, a new emissions analysis would be needed to ensure that the project would still conform, and it would be inappropriate to allow such projects to proceed based on the analysis in the most recent plan/TIP.

### *Non-regionally Significant Projects*

For those projects which are not regionally significant, but which will affect vehicle travel, emissions may be estimated in accordance with reasonable professional practice, even if the nonattainment areas are required to perform transportation network demand modeling (see Chapter 6). For example, the regional emissions analysis may assume that VMT on local streets not represented in the network model is a certain percentage of network VMT, without explicitly considering the new local streets. (58 FR 62189, 62111, Nov. 24, 1993.)

## **TRAFFIC SIGNAL SYNCHRONIZATION PROJECTS**

Specific regional emissions analysis requirements are applicable to exempt projects and traffic synchronization projects in determining conformity.

On September 24, 1996, Congress amended the CAA (H.R. 2988) to state that traffic signal synchronization projects are exempt from conformity determinations prior to their funding, approval, or implementation. However, once these projects are funded, approved, or implemented (whichever occurs first), they are to be included in the conformity determinations for future transportation plans, TIPs, and projects. The conformity rule reflects this CAA amendment in the new §93.128, “Traffic signal synchronization projects,” and, as shown below, this section states that traffic signal synchronization projects may be approved, funded, and implemented without a conformity determination.

*40 CFR §93.128, as amended by 62 FR 43797, August 15, 1997*

*Traffic signal synchronization projects may be approved, funded, and implemented without satisfying the requirements of this subpart. However, all subsequent regional emissions analysis required by §§93.118 and 93.119 for transportation plans, TIPs, or projects not from a conforming plan/TIP must include such regionally significant traffic signal synchronization projects.*

## **WHEN CAN EMISSIONS CREDITS BE INCLUDED IN THE EMISSIONS ANALYSIS ?**

Exhibit 15 summarizes the conditions for including emissions reduction credits in the regional emissions

analysis. Refer to 40 CFR §93.122(a)(3) and (4), as amended by 62 FR 43814, Aug. 15, 1997, for additional detail.

Section 93.110(e) of the conformity rule states that:

*“The emissions analysis may not include for emissions reduction credit any TCMs or other measures in the applicable implementation plan which have been delayed beyond the scheduled dates(s) until such time as their implementation has been assured. If the measure has been partially implemented and it can be demonstrated that it is providing quantifiable emission reduction benefits, the emissions analysis may include that emission reduction credit.”*

If a control measure in an approved SIP is delayed or changed in whole or in part (e.g., the legislative authority of a program has changed), then conformity determinations must reflect such a delay or change. The conformity analysis may only include the actual implementation of the control measure.

### **PROJECTS EXEMPT FROM REGIONAL EMISSIONS ANALYSIS**

As stated in the conformity rule, projects as listed in Exhibit 16 are exempted from regional analysis. However, they may still be subject to project level hot-spot analysis. Also, should the MPO, through the interagency consultation process, concur that these projects may have potential regional impacts, regional emissions analysis may then be required.

As specified in the conformity rule, the following requirements are applied to exempt projects:

*40 CFR §93.127, as amended by 62 FR 43780, 43817, August 15, 1997*

*Notwithstanding the other requirements of this subpart, highway and transit projects of the types listed in Table 3 are exempt from regional emissions analysis requirements. The local effects of these projects with respect to CO or PM<sub>10</sub> concentrations must be considered to determine if a hot-spot analysis is required prior to making a project level conformity determination. These projects may then proceed to the project development process even in the absence of a conforming transportation plan/TIP. A particular action of the type listed in Table 3 is not exempt from regional emissions analysis if the MPO in consultation with other agencies (see §93.105(c)(1)(iii)), the EPA, and the FHWA (in the case of a highway project) or the FTA (in the case of a transit project) concur that it has potential regional impacts for any reason.*

### **EXEMPT PROJECTS**

In addition, projects that are defined as exempt projects in §93.126 and listed in Table 2 of the transportation conformity rule are exempt from the requirement to determine conformity (not required for regional and project level analysis). Nevertheless, the emissions reductions from these projects *can* be included in the conformity analysis. (See also Appendix H- Analyzing Exempt Projects in the Conformity

Process, February 3, 1995.)

**Exhibit 15**  
**Determining Which Activities Are Eligible for Emissions Reduction Credits**

	<b>If:</b>	<b>Then:</b>
<b>TCM/other measures in the approved SIP</b>	1. their implementation has been assured or, 2. the measure has been partially implemented and it can be demonstrated that it is providing quantifiable emissions reduction benefits for the part of the measure that has been implemented	Include in emissions analysis
	1. Delayed beyond the scheduled implementation date(s) in the approved SIP	Do not include in emissions analysis
<b>Projects, programs, or activities which require a regulatory action in order to be implemented</b>	<u>One</u> of the following is met: 1. the regulatory action is already adopted by the enforcing jurisdiction 2. the project, program, or activity is included in the applicable implementation plan 3. the control strategy implementation plan submission or maintenance plan submission that establishes the motor vehicle emissions budget(s) for the purposes of §93.118 contains a written commitment to the project, program, or activity by the agency with authority to implement it, or 4. EPA has approved an option to a Federally enforced program, EPA has promulgated the program (if the control program is a Federal responsibility, such as vehicle tailpipe standards), or the Clean Air Act requires the program without need for individual State action and without any discretionary authority for EPA to set its stringency, delay its effective date, or not implement the program	Include in emissions analysis
	1. None of the above conditions met	Do not include in emissions analysis
<b>Control measures that are not included in the transportation plan/TIP, and which do not require a regulatory action in order to be implemented</b>	1. The conformity determination includes written commitments <sup>1</sup> (obtained prior to the conformity determination) to implementation from the appropriate entities who voluntarily commit to control measures; these entities must comply with the obligations of such commitments	Include in emissions analysis
	1. The conformity determination does not include written commitments	Do not include in emissions analysis

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<sup>1</sup>Written commitment as defined in the conformity rule means a written commitment that includes a description of the action to be taken; a schedule for the completion of the action; a demonstration that funding necessary to implement the action has been authorized by the appropriating or authorizing body; and an acknowledgment that the commitment is an enforceable obligation under the applicable implementation plan (40 CFR §93.101, as amended by 62 FR 43783, Aug. 15, 1997).



## Exhibit 16

### Projects Exempt From Regional Emissions Analysis

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Intersection channelization projects  
Intersection signalization projects at individual intersections  
Interchange reconfiguration projects  
Changes in vertical and horizontal alignment  
Truck size and weight inspection stations

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Source: 40 CFR §93.127, as amended by 62 FR 43818 Table 3 , Aug. 15, 1997.

*40 CFR §93.126, as amended by 62 FR 43817, August 15, 1997*

*Exempt projects.*

*Notwithstanding the other requirements of this subpart, highway and transit projects of the types listed in Table 2 are exempt from the requirement to determine conformity. Such projects may proceed toward implementation even in the absence of a conforming transportation plan/TIP. A particular action of the type listed in Table 2 is not exempt if the MPO in consultation with other agencies (see §93.105(c)(1)(iii)), the EPA, and the FHWA (in the case of a highway project) or the FTA (in the case of a transit project) concur that it has potentially adverse emissions impacts for any reason. States and MPOs must ensure that exempt projects do not interfere with TCM implementation.*

TABLE 2. - EXEMPT PROJECTS

**SAFETY**

*Railroad/highway crossing.  
Hazard elimination program.  
Safer non-Federal aid system roads.  
Shoulder improvements.  
Increasing sight distance.  
Safety improvement program.  
Traffic control devices and operating assistance other than signalization projects.  
Railroad/highway crossing warning devices.  
Guardrails, median barriers, crash cushions.  
Pavement resurfacing and/or rehabilitation.  
Pavement marking demonstration.  
Emergency relief (23 U.S.C. §125).  
Fencing.*

*Skid treatments.*  
*Safety roadside rest areas.*  
*Adding medians.*  
*Truck climbing lanes outside the urbanized area.*  
*Lighting improvements.*  
*Widening narrow pavements or reconstructing bridges (no additional travel lanes).*  
*Emergency truck pullovers.*

#### MASS TRANSIT

*Operating assistance to transit agencies.*  
*Purchase of support vehicles.*  
*Rehabilitation of transit vehicles<sup>1</sup>.*  
*Purchase of office, shop, and operating equipment for existing facilities.*  
*Purchase of operating equipment for vehicles (e.g., radios, fareboxes, lifts, etc.).*  
*Construction or renovation of power, signal, and communications systems.*  
*Construction of small passenger shelters and information kiosks.*  
*Reconstruction or renovation of transit buildings and structures (e.g., rail or bus buildings, storage and maintenance facilities, stations, terminals, and ancillary structures).*  
*Rehabilitation or reconstruction of track structures, track, and track bed in existing rights-of-way.*  
*Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet<sup>1</sup>.*  
*Construction of new bus or rail storage/maintenance facilities categorically excluded in 23 CFR part 771.*

#### AIR QUALITY

*Continuation of ride-sharing and van-pooling promotion activities at current levels.*  
*Bicycle and pedestrian facilities.*

#### OTHER

*Specific activities which do not involve or lead directly to construction, such as:*  
*Planning and technical studies.*  
*Grants for training and research programs.*  
*Planning activities conducted pursuant to titles 23 and 49 U.S.C.*  
*Federal aid systems revisions.*  
*Engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action.*  
*Noise attenuation.*  
*Emergency or hardship advance land acquisitions (23 CFR §712.204(d)).*  
*Acquisition of scenic easements.*  
*Plantings, landscaping, etc.*  
*Sign removal.*  
*Directional and informational signs.*  
*Transportation enhancement activities (except rehabilitation and operation of historic transportation buildings, structures, or facilities).*  
*Repair of damage caused by natural disasters, civil unrest, or terrorist acts, except projects*

*involving substantial functional, locational or capacity changes.*

*(Note: <sup>1</sup>In PM-10 nonattainment or maintenance areas, such projects are exempt only if they are in compliance with control measures in the applicable implementation plan.)*

In general, exempt projects include all projects which have no emissions impact, and are considered to be neutral or de minimis. For projects such as travel demand management strategies for which air quality effects cannot be accurately assessed in a traditional regional modeling context, other accepted methods (reasonable professional practice) of quantifying their effects are encouraged (40 CFR §93.122(a), as amended by 62 FR 43813, Aug. 15, 1997).

#### **REQUIREMENTS OF REGIONAL EMISSIONS ANALYSIS - APPLICABLE FOR ALL NONATTAINMENT AND MAINTENANCE AREAS AT ALL TIMES**

In addition to the requirements mentioned above, other requirements that are applicable for all nonattainment and maintenance areas are discussed below.

#### **Latest Planning Assumptions**

All conformity determinations must be based upon the latest planning assumptions in force at the time the conformity determination is made. The assumptions are summarized in Exhibit 17 and are discussed at length in joint guidance issued by FHWA/FTA/EPA on January 18, 2001 (See Appendix P). In short, areas are encouraged to review and update their planning assumptions regularly and are strongly encouraged to review and strive toward regular 5-year updates of planning assumptions, especially population, employment, and vehicle registration assumptions. Conformity determinations that are based on assumptions that are older than 5 years should include written justification for not using more recent information.

#### **Exhibit 17 Latest Planning Assumptions**

(40 CFR §93.110(b)-(f), as amended by 62 FR 43809, August 15, 1997)

<b>For</b>	<b>Assumptions</b>
General Planning Elements	* Must be derived from estimates of current and future population, employment, travel, and congestion most recently developed by the MPO or other agency authorized to make such estimates and approved by the MPO
Background Concentrations	* Must be based on latest assumptions about current and future background concentrations

Transit	<ul style="list-style-type: none"> <li>* Must discuss in each transportation plan/TIP transit operating policies (including fares and service levels) and transit ridership assumptions that have changed since the previous conformity determination</li> <li>* Must include reasonable assumptions about transit service and increases in transit fares and road and bridge tolls over time</li> </ul>
TCMs and Other Measures in SIPs	<ul style="list-style-type: none"> <li>* Must use the latest existing information regarding effectiveness of SIP measures that have already been implemented</li> </ul>
Interagency and Public Consultation Requirements	<ul style="list-style-type: none"> <li>* All key assumptions must be specified and included in draft conformity documents and supporting materials</li> </ul>

It should be expected that conformity determinations will deviate over time from the SIP's assumptions regarding VMT growth, demographics, trip generation, etc., because the conformity determinations are required by CAA §176(c)(1) to use the most recent planning assumptions so that transportation investment decisions are based on the latest information.

### **Latest Emissions Model**

All conformity determinations must be based on the latest motor vehicle emissions factor model available and approved by EPA for use:

*40 CFR §93.111, as amended by 62 FR 43809, August 15, 1997*

*Criteria and procedures: Latest emissions model.*

*(a) The conformity determination must be based on the latest emissions estimation model available. This criterion is satisfied if the most current version of the motor vehicle emissions model specified by EPA for use in the preparation or revision of implementation plans in that State or area is used for the conformity analysis. Where EMFAC is the motor vehicle emissions model used in preparing or revising the applicable implementation plan, new versions must be approved by EPA before they are used in the conformity analysis;*

*(b) EPA will consult with DOT to establish a grace period following the specification of any new model.*

*(1) The grace period will be no less than three months and no more than 24 months after notice of availability is published in the Federal Register;*

*(2) The length of the grace period will depend on the degree of change in the model and the scope of re-planning likely to be necessary by MPOs in order to assure conformity. If the grace period will be longer than three months, EPA will announce the appropriate grace period in the Federal Register; and*

*(3) Transportation plan/TIP conformity analysis for which the emissions analysis was begun during the grace period or before the Federal Register notice of availability of the latest emissions model may continue to use the previous version of the model. Conformity determinations for projects may also be based on the previous model if the analysis was begun during the grace period or before the Federal Register notice of availability, and if the final environmental document for the project is issued no more than three years after the issuance of the draft*

*environmental document.*

This criteria is satisfied if the most current version of the motor vehicle emissions factor model(s) specified by EPA is used for the conformity analysis.

The EPA has specified that MOBILE5a (released March 26, 1993) and MOBILE5b (released October 17, 1995, see Appendix D) are the latest approved emissions models for use outside of California, and EMFAC7F and EMFAC7G (approved April 16, 1998) are the latest approved emissions models for use in California. Users should use the appropriate guide to using the models which are available at respectively. Users should see the appropriate MOBILE5 Information Sheets with the emissions models. The Information Sheets are located on EPA's Office of Transportation and Air Quality's website (<http://www.epa.gov/oms/m5.htm>).

MOBILE5b was released as an interim update to the MOBILE5a emissions factor model. The models can be used in conformity determinations under certain circumstances. MOBILE5b can only be used for conformity analyses for VOC or NO<sub>x</sub> if the adequate or approved motor vehicle emissions budget being tested was created with MOBILE5b. Areas that do not have a MOBILE5b-based budget for VOC and/or NO<sub>x</sub> must use MOBILE5a for conformity analyses. Carbon monoxide areas can use either MOBILE5a or MOBILE5b in regional or hot-spot emissions analyses, regardless of which emissions model was used in the SIP.

In California, for CO, VOC, and NO<sub>x</sub> pollutants/precursors, EMFAC7G can only be used for conformity analyses if an adequate or approved budget exists based on EMFAC7G. All other areas should use EMFAC7F. For CO project-level analyses, EMFAC7F must be used in all CO areas, even if a budget is based on EMFAC7G. See Appendix D and/or E for the EPA memorandum and letter that provide more details regarding the use of current MOBILE and EMFAC models.

It is anticipated that in 2001, MOBILE 6 will be released by EPA. The final version of the model will be accompanied by initial guidance and training materials, and EPA will publish an official notice of availability in the Federal Register.

In California, EMFAC 2000 was approved by the California Air Resources Board in May 2000 and has not yet been approved by EPA. The use of EMFAC 2000 for transportation conformity purposes will coincide with the use of MOBILE 6 and current information is available at: [http://www.arb.ca.gov/msei/doctabletest/doctable\\_test.html](http://www.arb.ca.gov/msei/doctabletest/doctable_test.html).

The EPA, in consultation with DOT, will establish a grace period of no less than three months and no more than 24 months after notice of availability of a new emissions model is published in *Federal Register*.<sup>2</sup> The length of the grace period will be published in the Federal Register if the grace period is longer than three

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<sup>2</sup> 40 CFR §93.111, as amended by 62 FR 43809, Aug. 15, 1997.

months and will depend upon the degree of change in the model and the scope of planning efforts likely to be necessary by MPOs. Conformity determinations for plans or TIPs that began before the announcement of the new model or during the grace period may rely on the previous model. Conformity determinations for projects may also be based on the previous model if the analysis was begun during the grace period or before the announcement of the new model, and if the final environmental document for the project is issued no more than three years after the publication of the draft environmental impact document.

Once the grace period<sup>3</sup> expires, the new emissions model must be used for conformity determinations. *It is, therefore, essential that, during the grace period, areas determine whether use of the new model will result in problems demonstrating conformity with the existing SIP budgets (i.e., will the new model produce significantly higher emissions under the travel projections contained in the SIP).*

If it is determined that the new model will result in significantly higher emissions projections, an area may want to consider recalculating its SIP inventories and budgets using the new model, and submitting them to EPA for approval. Additional control measures may need to be added as necessary. It is noted, however, that past experience indicates considerable time (e.g., years) can be required to obtain EPA approval of new SIP assumptions and emissions projections. Notwithstanding this possibility, areas that have projected emissions near the level of their SIP budgets should carefully consider the effect of any new emissions model on future regional emissions analysis and conformity determinations.

Other regional emissions analysis requirements applied specifically to certain nonattainment areas will be discussed in detail in Section D. These requirements include network based model requirements for serious and above ozone and CO nonattainment areas (Chapter 6); and the use of local VMT forecasts based on Highway Performance Monitoring System (HPMS) or local counts including all travel in region (Chapters 6 and 7).

### **Consistency With SIP Assumptions**

The SIP contains procedures to monitor, control, maintain, and enforce compliance with the National Ambient Air Quality Standards (NAAQS). The conformity rule requires that ambient temperatures be consistent with those used in the SIP, and allows other factors assumed in the SIP, such as the fraction of travel in a hot stabilized-engine mode, to be modified in a conformity determination after interagency consultation and only under certain conditions (40 CFR §93.122 as amended by 62 FR 43814, Aug. 15, 1997). (See Section B for a discussion of the relationship between SIPs and transportation conformity.)

As defined in the transportation conformity rule, the following assumptions used in the regional emissions

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<sup>3</sup> As specified in 40 CFR §93.111, as amended by 62 FR 43809, Aug. 15, 1997 of the rule, EPA will consult with DOT to establish a grace period following the specification of any new emissions model. The grace period will be no less than three months and no more than 24 months, depending the scope of the model changes and the MPO's planning effort to assure conformity. EPA will announce any grace period longer than three months in the *Federal Register*.

analysis shall be consistent with those used to established the emissions budgets in the SIP:

*40 CFR §93.122(a)(6), as amended by 62 FR 43814, August 15, 1997*

*(6) The ambient temperatures used for the regional emissions analysis shall be consistent with those used to establish the emissions budget in the applicable implementation plan. All other factors, for example the fraction of travel in a hot stabilized engine mode, must be consistent with the applicable implementation plan, unless modified after interagency consultation according to §93.105(c)(1)(i) to incorporate additional or more geographically specific information or represent a logically estimated trend in such factors beyond the period considered in the applicable implementation plan.*

See the questions and answers section at the back of this chapter for further information on assumptions in a submitted or approved SIP.

#### **CONDITIONS UNDER WHICH NEW REGIONAL EMISSIONS ANALYSIS IS NOT REQUIRED**

*40 CFR §93.122(e), as amended by 62 FR 43780, 43818, August 15, 1997*

*(1) The TIP may be demonstrated to satisfy the requirements of §§93.118 ("Motor vehicle emissions budget") or 93.119 ("Emissions reductions in areas without motor vehicle emissions budgets") without new regional emissions analysis if the regional emissions analysis already performed for the plan also applies to the TIP. This requires a demonstration that:*

- (i) The TIP contains all projects which must be started in the TIP's timeframe in order to achieve the highway and transit system envisioned by the transportation plan;*
- (ii) All TIP projects which are regionally significant are included in the transportation plan with design concept and scope adequate to determine their contribution to the transportation plan's regional emissions at the time of the transportation plan's conformity determination; and*
- (iii) The design concept and scope of each regionally significant project in the TIP is not significantly different from that described in the transportation plan.*

*(2) A project which is not from a conforming transportation plan and a conforming TIP may be demonstrated to satisfy the requirements of §§93.118 or 93.119 without additional regional emissions analysis if allocating funds to the project will not delay the implementation of projects in the transportation plan or TIP which are necessary to achieve the highway and transit system envisioned by the transportation plan, and if the project is either:*

- (i) not regionally significant; or*
- (ii) included in the conforming transportation plan (even if it is not specifically included in the latest conforming TIP) with design concept and scope adequate to determine its contribution to the transportation plan's regional emissions at the time of the transportation plan's conformity determination, and the design concept and scope of the project is not significantly different from that described in the transportation plan.*

#### **Reliance on Previous Regional Analysis for Conformity Determinations**

The conformity rule allows for the reliance on the previous regional emissions analysis for conformity determinations on TIPs that are consistent with the transportation plan. However, a formal conformity determination is still required. Section 93.122 (e) as shown above specifies the requirements for reliance on the previous analysis, but its applicability must be documented. Documentation of the timely implementation of TCMs, and an affirmative conformity determination must then be made by the MPO and FHWA/FTA per 93.104(c). In the preamble to the November 24, 1993 conformity rule, EPA discussed the issue of TIP amendments and when regional emissions analysis on the TIP is required. EPA stated that:

*Paraphrased from 58 FR 62202, November 24, 1993*

*“...conformity determinations on minor TIP amendments do not necessarily require new regional emissions analysis, although a positive conformity finding must be made and the regional emissions criteria must be satisfied by documenting the appropriateness of relying on the previous analysis.”*

Notwithstanding the conditions stated above for when regional analysis is not required, the table below shows which pollutants are subject to regional analysis requirements.



## Pollutants for Which a Regional Emissions Analysis Is Required\*

Area Designation	Pollutant Precursor
Ozone Areas	VOC, NO <sub>x</sub> <sup>4</sup>
CO Areas	CO
PM-10 Areas	PM-10 <sup>5</sup> , VOC, NO <sub>x</sub>
NO <sub>2</sub> Areas	NO <sub>x</sub>

\* Areas may be nonattainment or maintenance areas for more than one pollutant (e.g. nonattainment for ozone, CO and PM-10).

### QUESTIONS AND ANSWERS

#### **Can non-exempt, regionally significant projects be added to the plan/TIP without regional analysis?**

No. Every plan/TIP amendment that involves regionally significant, non-exempt projects<sup>6</sup> requires the same level of regional emissions analysis. The reasons for this decision can be summarized as follows:

*Paraphrased from 40 CFR, as amended by 62 FR 43795, August 15, 1997*

*...1. EPA believes that the restrictions that would have to be imposed on the flexibility would outweigh its benefits. EPA has determined that the flexibility to add projects without a regional emissions analysis would have to be accompanied by safeguards or limitations such as adding minimum criteria for alternate analysis methodology in the rule; limiting the flexibility to types and numbers of projects; or requiring that the emissions from the existing plan/TIP be below a minimum threshold of the applicable emissions budget. Including such safeguards could result in additional rule complexity that would hamper use of the proposed flexibility;*

*2. The few methodologies proposed were not sufficient to form the basis of nationally applicable, minimum guidelines for alternate emissions analysis. When EPA proposed the flexibility, it was seeking a procedure that would yield similar results as a full-scale regional analysis but with less*

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<sup>4</sup> NO<sub>x</sub> is required for the emission reduction tests if no adequate budgets exist, unless the EPA administrator determines that additional reductions of NO<sub>x</sub> would not contribute to attainment. See 40 CFR §93.119(d)(2), as amended by 62 FR 43812, August 15, 1997. A NO<sub>x</sub> waiver from the build/no-build test does not eliminate the requirement for the budget test if a NO<sub>x</sub> budget is established which EPA has deemed adequate.

<sup>5</sup> Regional analysis of transportation related precursors of PM<sub>10</sub> is also required if the EPA regional administrator or the director of the State air quality agency has made a finding that such precursor emissions from within the area are a significant contributor to the PM<sub>10</sub> nonattainment area and has so notified the MPO and DOT.

<sup>6</sup> A non-exempt project is any transportation project other than those listed in 40 CFR §93.126, as amended by 62 FR 43816-17, Aug. 15, 1997 "Exempt projects," and 40 CFR §93.127, as amended by 62 FR 43817-18, Aug. 15, 1997 "Projects exempt from regional emissions analysis."

*effort. However, the methodologies suggested were sketch planning techniques, which are ancillary to but not substitutes for network modeling;*

*3. EPA and DOT believe that regulatory constraints on the proposed flexibility would defeat the flexibility's purpose. Many commenters did not believe EPA could or should develop alternate analysis techniques that would apply nationally, because the value of the flexibility would be its application on a case-by-case basis. In addition, many stakeholders want the regulatory text to be streamlined and procedural modeling guidelines to be minimized. EPA and DOT also believe that the possible benefits of the proposed flexibility do not warrant the complication of a new set of modeling guidelines; and*

*4. EPA and DOT believe the time and effort spent in developing an alternate procedure and getting agreement from all involved agencies seems greater than that involved in running the regional model. Many commenters stated that the flexibility would be used infrequently, or only in limited circumstances; thus would not have a large impact on day-to-day implementation of the conformity rule. Some commenters believe that a full-scale regional analysis is just as easy as using an alternate sketch planning method....*

**Who is responsible for the regional analysis for the portion of the nonattainment areas that lie outside the boundary of the metropolitan area?**

Where the metropolitan planning area does not include the entire nonattainment or maintenance area, a process is required to be developed through the interagency consultation process involving the MPO and the State DOTs for cooperative planning and conformity analysis for all projects outside the metropolitan area and within the nonattainment or maintenance area (40 CFR §93.105(c)(3), as amended by 62 FR 43805, Aug.15, 1997). This is especially important for projects being amended into the STIP.

**How is conformity determination made for multiple nonattainment areas within a MPO, or if a nonattainment area includes multiple MPOs, or multi-state nonattainment areas?**

In general, interagency relationships and responsibilities will be established by the conformity SIP revision. For multi-State nonattainment areas, agreements should be made among agencies on how to make a conformity determination.

If a metropolitan planning area includes more than one nonattainment area, a conformity determination must be made for each nonattainment area. Emissions budgets established in the SIPs for the included nonattainment areas *may not* be combined or reallocated between nonattainment areas. Where a nonattainment area includes multiple MPOs, the control strategy SIP may either allocate emissions budgets to each metropolitan planning area, or the MPOs must act together to make a conformity determination for the nonattainment area (40 CFR §93.105 (c), as amended by 62 FR 43805, Aug.15, 1997). Emission reduction tests, such as the build/no-build test, must be applied *separately* in each nonattainment area in the case of one MPO covering more than one nonattainment area (58 FR 62208, November 24, 1993).

**Do conformity determinations need to include an assessment for how current planning assumptions deviate from the SIP's assumptions?**

EPA does not require an assessment of the degree to which key assumptions in the transportation modeling process are deviating from those used in the SIP, and if the deviations are significant or require an evaluation of the impact of the deviation on the area's ability to reach the SIP's emissions target. This process is not required because the conformity determinations themselves are intended to demonstrate that given the most recent planning assumptions and emissions models, the SIP's emissions reductions will be met. States may voluntarily require such as process in their conformity SIP revisions.

*(From FHWA/FTA/EPA January 18, 2001 Memorandum on Use of Latest Planning Assumptions in Conformity Determinations)*

**What if the assumptions used in a submitted or approved SIP are not the most current and best information for conformity determinations?**

The latest planning assumptions must be used in conformity determinations, even if they differ from those used in the SIP. In many cases, the MPO may have developed more recent assumptions for the conformity process than those included in a submitted or approved SIP. For example, the MPO may have adopted new population, employment, and/or socioeconomic projections or updated transportation models since the SIP was submitted. In this case, an MPO would use the latest planning assumptions based on the newer projections and model improvements for conformity. The consultation process should be used to ensure that air quality and transportation planning processes anticipate such changes in planning assumptions.

It is expected that planning assumptions in the conformity process will change over time from those used in the SIP. Conformity determinations must reflect updated planning assumptions, even if those assumptions are different from those used in the SIP's development. EPA articulated this in the preamble to the November 24, 1993, conformity rule:

*58 FR 62210, November 24, 1993*

*It should be expected that conformity determinations will deviate from the SIP's assumptions regarding VMT growth, demographics, trip generation, etc., because the conformity determinations are required by CAA section 176(c)(1) to use the most recent planning assumptions.*